INFORMANT: Michael Ewart
INTERVIEWER: Robert Hilderbrand
DATE: 19 May 1999

RH: [The interviewer Robert Hilderbrand]
ME: [The informant Michael Ewart]

[Beginning of side one, tape one]
[Interview begins.]

RH: This is Robert Hilderbrand, interviewing Mike Ewart on 17th May 1999 in Rapid City, South Dakota. Mike would you give us your full name, unit assignment and your basic duty position.

ME: My full name is Michael D. Ewart. I was assigned to the 44th Strategic Missile Wing at Ellsworth Air Force Base, South Dakota. The time period of that assignment was June '69 to of September of 1990, except for one year in Korea.

RH: First, tell us something about what your duties were. I know you had many duties, but what comes to mind? What jobs did you hold in the missile business?

ME: Well, I began assigned to a communications squadron, 28th Communication Squadron, at the time. And my duties were cryptographic maintenance. We went out to the missile sites and maintained the, what they called the 465L, which was a strategic alert command control system. This system alerted the missiles when it was time to do a launch and we had responsibility for maintaining communication links between the main base and the missile sites, and main base and other main bases where the lines were tied. After 1975, I retrained into missile maintenance and at that time I worked on the rest of the system, from communications on through power distribution, air conditioning, electrical, just about anything you could think of from launch to target destination. We covered that in different aspects of the training.

RH: Why'd you make that change?

ME: I made the change because in '75, I had just come back from a visit to Korea where I'd spent a year of over there on a little remote site. Fifty Americans and three hundred Koreans on top of a mountain top. And this is a Minuteman base where it was a more stable assignment, where you could come back to a base and they weren't overseas assignments, so once I retrained into this field, the missile field, you were pretty much expected to stay in one of the six missile bases for your entire career.

RH: So in a sense that made you a permanent part of the missile base community in a way that your first job wasn't?

ME: The first job was communications and in most career fields in the Air Force, you can expect to move about every three to four years. And once you got into the missile career field, it was a small field. Basically, there's only about a thousand people per base. And of these people, once you got into this, these career fields--there's about five of them--you don't go anywhere except to those missile bases. And that way you keep your skills and your training oriented against that system and you don't try to learn every system in the Air Force.

RH: Did that make those positions really highly prized?

ME: I don't know if they were necessarily highly prized. Some people sought them and others wanted to get out and see the world and it just depended on your point of view. In 1972, I had just gotten married to a local gal and by '75 I was thinking it would be nice to be able to stay in one place for awhile.

RH: And then you held some other positions after that?

ME: Yes, when I retrained into missile maintenance directly, that was, I started out as a power, refrigeration, and electrical shop technician. And that's people that work on the support vehicles and most of the support equipment that goes out to maintain the missile sites themselves. This includes forty-foot semi-trailers that have their own on board air conditioning, heating and power generation systems.

RH: Did you, one of the questions, were you adequately prepared for your jobs? How much training did you have? Did you have to teach yourself a lot of things?

ME: Oh no, that the Air Force takes care of that. My first school or technical school on electronics was forty-three weeks long. Nearly a year at one place. And the Air Force doesn't take the college concept of giving you a summer off. When you're there, you're there and they, they compress that information and you get quite a lot of information over a short period of time, forty-three weeks. We had a two-week break in the middle of that, but that was an intense course. For the missile maintenance field, initially I went to a nineteen-week course. We were very fortunate in having some cross trainees and we'd had, in the group that I was in, we'd had a lot of experience with electronics and some mechanical systems before we got into the tech school. And we were allowed to go at our own pace where we completed the nineteen-week course in six weeks.

RH: Is there any difference between the way that works in the missile field and in any other occupational specialty?

ME: No, it's the, see the communications was not straight missiles. That was all communications for the Air Force. And so that was a general Air Force school. The school at Chanute, Illinois, where they had the missile school, was, was specific for the missiles. They had other classes being taught right along side it for aircraft maintenance for other jobs that in the room next door you may have a different system or different training going on.

RH: Did you spend most of your time in the workday at a missile site? At a silo?

ME: Unfortunately not. The missile system is a very remote system. We're covering about I think three hundred, three hundred square miles or no, it's even more than that. It's most of western South Dakota. And when you've got sites that far out, you're spending most of your time on the road.

RH: Was there a standard maintenance schedule? So that you had, you were doing a dot to dot from one silo to another? Or were you sort of scattering back and forth between places where there were problems that you might have to deal with?

ME: Well, the system was intended to be nearly maintenance free when it was designed. Now, it didn't end up that way. But what we had was a select group of people who are called periodic maintenance team and they would go out on an annual basis to each of the sites and they would perform the lubing, changing the oil filters, making sure that things were operating properly. And we also have an extensive alarm system that remotely tells the operators of the system what's going on out at the missile site. Whether we have people trying to get on top-side security alarms, whether there's flooding on the missile, or it's too cold or too hot. There's a variety of different alarms that go off. And when the alarms go off, depending on the priority of that alarm, they will dispatch a team that day or schedule one for sometime in the distant future.

RH: Were there only certain kinds of alarms that you responded to?

ME: Yes there were a limited number of alarms that I actually responded to. In Missile Engineering, which was a field that I held later that, there'd be a team that went out and tried to find the problem initially. If they weren't able to find it, they'd send the engineers out there to put their heads together and see what they could figure out.

RH: I guess part of my question, though, was, you wouldn't respond to a security alarm?

ME: No. Depending on the type of security alarm, it would be responded to by either a security alert team—SPs, Security Police—or they'd be responding by a maintenance team. And usually a Security Police would be out there first just to confirm that there were no hostile parties on site.

RH: Even if it seemed to be just a maintenance kind of problem? I mean, was there, was there the assumption that maybe the alarm, even though it didn't indicate any intruders, that maybe the maintenance problem had been caused by intruders?

ME: No. There's usually a number of different alarms you'll get with a maintenance problem that one will trip off a second and a third and they will not fall in the same sequence as you would with an intruder.

RH: Did you all take the jobs you were doing really seriously?

ME: Absolutely. You had to. You're dealing with something that could blow a hole in the ground out there.

RH: Did you ever encounter anyone that you worked with that didn't take it seriously?

ME: Not that was in the field for very long. That was part of our Personal Reliability Program, which, where it was everyone was kind of watching the people around them to make sure that they were responsible people and that they weren't hallucinating, having drug trips, or any of this sort of thing. And it was kind of watched carefully.

RH: How was that done? Were you interviewed periodically by people who were looking for these things?

ME: You were not interviewed periodically, you, the people that worked with you were the ones that were watching, and your supervisors, and then they hospital was monitoring their side of things, too, and they check your records.

RH: So if you'd been working with someone and you were sort of questioning whether they were capable of handling the pressure or whether they were really taking this seriously?

ME: It would be my job to report that to my supervisors who …

RH: Did that happen?

ME: Occasionally, yes. They would take a person off and try and find out what's going on. Maybe they sent him to the hospital to have him evaluated or they would find out themselves.

RH: Did it ever go so far that that led to incidents that you had to deal with before you told anyone? Or did you usually have enough warning that something seemed to be going on with a coworker that didn't result in anything too exciting?

ME: Well, there was never anything exciting that I was involved with. Usually, and the individual has the opportunity, or has the option of reporting themselves and saying, "I've got too much stress. My family situation is too serious right now. I don't feel I should be out there working on the missiles. I can't focus." And they take them off the job then.

RH: Was, was the stress caused by the job? Or was it, you mentioned family stress and all those other things that might cause someone not to feel they were up to the job, but was working on the missiles a high stress job?

ME: No, it wasn't for me. It's an individual thing, I believe. And I couldn't say for everyone, in fact I knew some people that were disqualified from career fields—missile career fields—because of some of the things required in the job. When you're working on the missile itself, you're in a basket called an Elevator Work Cage, which is basically the size of this coffee table. And two people are in this thing and it raises and lowers along side of the missile with nothing in front of you except the round surface of the missile and nothing behind you except the, the steel wall of the launch tube. And you've got better than eighty feet down to the bottom.

RH: So some of the stress was the work conditions. Was there special stress that had to do with the fact that it was a missile?

ME: Most people, by the time they got into the career field, were not alarmed or concerned that it was a missile. We had the most, the safest missile that we could have at the time. The Titan missiles were a liquid fuel where ours were a solid fuel and the solid fuel is a much, much safer, there were no vapors of fumes from the fuels to worry about.

RH: And was there special stress knowing, I mean, based on the importance of the missiles? That you have to do this right? That you make a mistake it could be critical to national security? People could die who shouldn't die?

ME: I don't think that that was foremost in anyone's mind, but it was always there. It's a knowledge that's with you at all the time, but it's not

something that you're focused on. You're focused on the job and repairing that particular item that you're sent out to fix.

RH: I think what I'm trying to get at is, was there any sort of special stress beyond a normal job situation that had to do with the type of work you were doing? With some awareness of the missiles themselves or the role you were playing in national security?

ME: There was, but it was not something that was that apparent or felt that obviously.

RH: But I suppose that is the reason why there were all the special concerns to keep your eyes on one-another. I mean someone seemed to think that there was an issue there.

ME: Oh yes. Well, there, there was even at, there was a secondary called a "no lone zone." In certain parts of the missile site there was a "no lone zone" where no individual could go there unaccompanied without having a violation called on them. That they'd violated "no lone zone" and a big investigation went on, and a "no lone zone" was where a critical component, something that could cause launch of the missile or disable the missile.

RH: And why wouldn't someone be permitted there alone?

ME: Because it could cause a launch, a possible launch of the missile or disabling of the missile. And this is, these are critical parts of the missile system that we didn't want any damage to happen to them, either intentional or accidental. So we had a second set of eyes watching.

RH: Well I guess, I guess that intentional versus accidental was what I was getting at. Is the second set of eyes there to avoid an accidental …

ME: Both.

RH: damage or not primarily …

ME: They were there, not primarily, that was done with the Personal Reliability Program where they were screened out and then this, the second side of it is that when you reach a certain area of the system, a critical component area, it was a "no lone zone" and, and you had to have a second person with you to verify that you were doing the procedure properly. Whether it was a lack of knowledge or you weren't reading the book correctly, or the book is wrong.

RH: But so you don't think the primary concern was that you needed a second person there because someone might intentionally damage the missile. Or intentionally launch the missile. Or …

ME: No. That was, that was not the main concern, but that was a possibility and that was another reason for the second set of eyes, was to verify that if the first, the PR, yeah, the Personal Reliability Program broke down, that you had a second set of eyes there all the time anyway.

RH: Did it make you feel that the environment you were working in was overly suspicious? Or too suspicious of you? Not trusting enough?

ME: [laughs]

RH: Does that make it hard to work there in anyway?

ME: It makes it difficult to work there, yes. You do have to worry about having a second set of eyes on you because a missile is a round object. And around this object you had a cylinder, a steel cylinder. And then the equipment room was a shell outside of this steel cylinder. And you can get in one point of the equipment room and the person that's with you can be just fifteen steps away and around the arc of that second cylinder, they couldn't see you. So they'd have to position themselves where they're able to see you and still do whatever they're doing at the same time.

RH: Did you ever work with anyone where you took the "no lone zone" particularly seriously? That you thought I'd better be sure I keep my eyes on this person?

ME: No. If you had a person like that, you should have been turning them in initially before they got to that point.

RH: Yes, but, but maybe you already, maybe you were about to do that and you hadn't gotten around to it yet. Or the opportunity hadn't arisen?

ME: No. That situation never came up in my career.

RH: Do you think it ever happened? Or did you have any knowledge of it ever happening that someone maliciously reported someone as being unfit when really they weren't? And it was part of personal animosity?

ME: That could possibly have happened and that's why the hospital, a third party, was involved with the evaluation of them to verify that, yes, there's a problem or no, there wasn't.

RH: But wouldn't that person have had a problem, a mark on his career, just for having been reported by someone?

ME: No.

RH: You don't think so?

ME: No, they didn't.

RH. Okay. Um, one of the things that we noticed was the motto of the 44th, of the 44th wing. "Aggressor Beware." I mean, does that, did that have any special meaning for you?

ME: That's been a number of years ago. I've been away from the missile wing now for ten years. That particular phrase, um, yes, it did. Some of the art that was drawn on the walls of the launch capsules had similar thoughts about it. We had, "Thirty minute delivery or your next one's free."

RH: I've been down there and seen that. I guess what I was getting at, did you feel in any strong, acute sense that you were contributing to national security? Was this a point of special pride or involvement?

ME: Oh yes. Just in the military, the uniform and supporting my country was a very important part of why I stayed with it.

RH: Yeah, and I certainly understand that about the military, but I guess I meant maybe something more than that as a result of, you know, this special interest in the missiles. That was there something more to it there?

ME: Well, there was I think a lot of pride in the, when the Cold War ended, the Berlin Wall came down and the Soviet Union crumbled …

RH: Um hmm. Um hmm.

ME: that we had been successful and standing, standing by our missiles and making sure that we were ninety-nine percent capable of launch at all times.

RH: Was there, how did you all react to that? Was, did you have a party? I mean, was there, did you go around slapping each other on the back?

ME: No. It was …

RH: Was there some special recognition of that …

ME: There was no specific incident when that occurred to say that it was just sort of a personal pride that we'd accomplished our mission.

RH: You didn't talk about that with anyone at the time?

ME: Not in groups. Individuals.

RH: Did you, during this period, did you have a strong sense that there was a real chance of a Soviet missile attack?

ME: Uh …

RH: That you were at risk?

ME: Yes. There was a real chance at all times. And being a missile site, you were a target for one of the first strikes that they would want to knock out any kind of retaliation that we'd have, be able to do. And, so, each of the sites was hardened with a concrete blast door, four-foot thick and a number of other devices to protect them in case of a nuclear blast.

RH: To protect them?

ME: The missile. Yes, that was what was intended to survive.

RH: What was there to protect you?

ME: Not a thing. We were expendable and we understood that.

RH: [laughs] Were there particular times when you felt that more strongly?

ME: Possibly during some raised tension episodes that occurred. Missiles were on higher alert condition than ever.

RH: Do you remember any details about any of those times?

ME: Not specifically. I do remember an occasion or two where we had some missiles that were the opposite way. That we thought they were intending to launch without the control that they needed over them. That the indicators we were getting through the system said that this missile is, is preparing to launch. And we'd have to go out and prevent that from happening.

RH: Why did you think that might have been happening? I mean, what would have been causing that?

ME: Well, the alarm systems would go off and should an alarm go off saying that the missile was starting its countdown …

RH: Um hmm.

ME: or something like that you'd have to get out there and what they call "safe" the missile. There was, there were safety pins and systems where you could turn it off on-site.

RH: When that was happening, what did you think was the force that was making it happen?

ME: The force that was making it happen was usually a system malfunction somewhere throughout the system.

RH: Um hmm.

ME: And they would send out commands to the missile. If it didn't accept a command when it was supposed to accept it then we had concerns.

RH: So was this in a sense routine?

ME: It was never routine. When something like that happens, it got your blood pressure up in a hurry.

RH: Okay. But there wasn't the sense that maybe the powers that be in the United States government had decided to launch some missiles and just hadn't bothered to tell you about it?

ME: [laughs] No. My first seven years in communications sort of cleared that up. I worked on the system that sent that command from higher authority down to the missile sites itselves and I knew that if it came down, it was a verified command. That it wasn't an accident. And we would have followed that authority.

RH: But I guess I mean even not an accident. That maybe someone had made a decision to fire one of those missiles.

ME: If someone had a made a decision to fire one of those missiles, that was what our job was about! We were there to make sure the missile's ready to go for them.

RH: But not someone who was unauthorized?

ME: No, not an unauthorized party. This would have to come through the command system via the President.

RH: I guess what I'm getting at, was there ever a sense, a question in your mind when there, when you were dispatched to safety a missile, that perhaps you were being sent to do this, but only because someone didn't know that in fact …

ME: Oh no, the system is not designed to allow that to happen. It wouldn't be an unauthorized launch command.

RH: You never really had any concern? I guess I'm, the reason I'm …

[Interruption.]

RH: Were there any particular times when you were more nervous than usual about the possibility of a Soviet attack? When you felt more at risk? More threatened? More scared maybe?

ME: Not that come to memory right now. I can't capture anything that that was specifically, that was when I was more scared. I know there are some incidents out there, but I can't at this time.

RH: In a totally different direction, did it ever bother you that this system of missiles that you were part of maintaining could end life on this planet?

ME: It was a concern to me, and probably a concern to everyone else around me. But it was also the main deterrent for our military in order to prevent a like attack upon us. And I think that deterrent was what probably worked for both sides to prevent them from ever pushing the button.

RH: Did you ever, did you ever talk in, about ethical concerns about what you were doing?

ME: No, I can't say that it was a big topic of conversation.

RH: And it never came up?

ME: Not, not that I can recall right now.

RH: Did it seem to you likely that the missiles were ever going to be used?

ME: Did it seem to me that the missiles were ever going to be used?

RH: I mean, did you go about your business …

ME: The missiles were always ready to be used. We hoped that they were never going to be used, but on the other side of things, the system was,

was always operational to a very high level. And each year or two we would even select a missile randomly, take it to Vandenberg and launch it out over the Pacific, just to confirm that it operated and all of its guidance system took it to the exact place where it was supposed to be. And they even measured how close to its target it came.

RH: But was it part of your normal way of getting through the day, that you thought "Well, the missiles aren't going to be launched today?"

ME: No, that, there was never a time schedule because we're dealing with a global operation, you as an individual didn't know what was happening on the other side of the world that could generate a strike. It could happen at midnight or noon or anytime in between those numbers.

RH: That would make me nervous. Did it make you nervous?

ME: Well…

RH: Were you ever scared?

ME: It was something you lived with. It was not anything specifically that got you nervous and after twenty-eight years of it, I kind of got numb to the situation of, you know it's there, but you don't focus or dwell on it.

RH: You mentioned something before about advanced states of readiness or alert.

ME: Uh-hmm.

RH: Do you remember any of those times?

ME: Specifically? No, I can't specifically, uh…

RH: But you were on duty sometimes when that happened?

ME: Sometimes, yes, when we reached an advance state of readiness.

RH: And when, when that happened, were you aware of the reason for it?

ME: Usually, if for no other reason, you'd see in the newspapers and hear what's going on and, uh ...

RH: So there was a connection in your mind between what you knew about what was going on in the world and the advanced state of readiness that you were brought to?

ME: Uh-hmm.

RH: Were you more nervous then? Was that a more difficult time? A harder time to be working there?

ME: Well, I think with missiles we were more aware of the security system and watching to make sure that no one tried to violate the security of the missile, and to tamper with that missile, because that was our way of fighting a war and we need to make sure it was ready to go and not compromised in any way by terrorists or spies or anything.

RH: Were you more observant of your co-workers in those times? Was that part of the advanced state of readiness?

ME: More aware of our co-workers and everything around us. Whether it would be a suspicious package that suddenly appeared or an unknown car. Even parking too close to a building in these conditions, was not accepted. As you've heard of Oklahoma City, as an example, we had limits on how close you could park to a building.

RH: Were vehicles ever permitted near the missile silos, apart from your own vehicles?

ME: The missiles themselves are each remotely located, and they have a chain link fence around the outer perimeter. No one was allowed inside that chain link fence unless they were secured, unless they were cleared through the security system by the security police in advance. They had to know who the person was approaching. They had to have two forms of I.D. and verified, and, uh ...

RH: What about the roads leading up to the missile? Usual dirt or gravel roads nearby? Were they also …

ME: They were also monitored. We monitored for any strange vehicles that would come up and observe us. How close they'd get. They'd be checked out to find out who it was and why they were out there.

RH: Now were all the missiles that you worked on here Minutemen?

ME: Yes, this was a Minuteman II system at this base.

RH: Okay. Did you work on Minuteman I or was that before your time?

ME: Minuteman I was just being phased out of this base when I was first assigned here in '69. And I was in communications at the time so I never saw a Minuteman I in the silo.

RH: How do you think that the Minuteman II then, to focus on that, compared to their counterparts in the Soviet missile field?

ME: How they compared? Uh, we …

RH: Did you have a sense of that?

ME: Yes, we did. We'd seen scale models and so forth of what they had versus our missiles. They had a much wider variety of missiles. Much, much bigger missiles. They were usually liquid fueled from what we were told. And the payload on them was much larger than what American missiles.

RH: I supposed you're talking about mostly SS-20s and SS-22s?

ME: Uh-hmm.

RH: Uh, what was, what would you say was the purpose of your being briefed on that?

ME: Uh …

RH: Why did they want you to know this?

ME: They wanted us to know that the other side had those missiles too. And that the threat was there and we needed to respond to that threat by having at least something comparable over here.

RH: So it was a morale issue? Or to overcome their concern that you might have ethical concerns?

ME: That may have been the reason. It was never explained in that form, that it was an ethical concern.

RH: Did, were you ever led to believe that the Soviet missiles particularly endangered the capability of our missiles? That is that they had, they were especially accurate or especially powerful? That maybe the hardened silos might not suffice? Anything like that?

ME: There was always the possibility that the silos would not suffice for the size of the missiles that they were using.

RH: Um hmm.

ME: Uh …

RH: Was that purpose of, part of the purpose of them telling you about them? To heighten your sense of the risk to our system? The need …

ME: I don't think it was….

RH: You need to be ready and launched before a first strike could, could take them out?

ME: I think it's, it was an elevated awareness that they were providing, but I don't know that it was a concern for a first strike or anything at all.

RH: Now you were working, were you working on the Minuteman IIs in October 1973?

ME: October '73? That would be ah …

RH: Just before you were in Korea?

ME: I was still in communications.

RH: Okay.

ME: So I was only working at the, the Launch Control Centers on communications systems at that time.

RH: That was a time of particularly heightened alert status. The Arab/Israeli War was going on, and there was concern about Soviet intervention in that war.

ME: I'm afraid I was, I was in Korea at that particular time. That was during…

RH: Even worse. [Laughter.] Okay …

ME: That's another story all together.

RH: Yeah. Well then, it affected you but not and my question was how did this affect you, but it affected you but not having anything to do with the missiles, so we'll move on. How would you evaluate your unit's overall morale?

ME: Very good. They, I think the weather conditions were probably one of the more challenging things of the missiles, going out to the missiles and working on them. The weather out here on the plains can get pretty rugged once in awhile.

RH: Were there any particular times when morale seemed higher or lower? I guess maybe higher at the time of the Berlin Wall coming down, for example.

ME: Uh-hmm.

RH: You mentioned, were there other times like that?

ME: Um, I think probably our leadership focused on the alert. They kept track on a daily basis, I guess you'd say. They reported what, how many missiles were on alert and ready to launch at any specific time. And we had celebrations when our alert rate was maintained at a 99.5. In fact, they made up t-shirts and ...

RH: So morale was related to job performance and evaluation of your job?

ME: Job performance. We focused on the job.

RH: You don't see a relationship between morale and other events in the world?

ME: No, we didn't, we didn't really focus on what the other events were because it was more political oriented and as the military we are not political operative, we respond to …

RH: But you're human beings…

ME: Yes.

RH: And your morale is likely…

ME: But that was focused more as an individual and not as a group.

RH: Yea. What about things when the arms reduction talks were going on? The SALT talks and then later the START talks. Did that have an effect on morale?

ME: I think it did. It did in my respect in that, I wondered whether they were going to be successful.

RH: Did you want them to be successful?

ME: Well in some ways yes, and in others no. I mean, it would do away with the job, but on the other hand it would make the world safer.

RH: Uh-hmm.

ME: And yes, you wanted a safer world and that was part of what the deterrent, the objective of being there in the first place as a deterrent. And it was more "Can you trust what's happening there, can you trust the politicians?"

RH: I mean, was there a sense that maybe it wouldn't make for a safer world? That the world was as safe as it could be because the missiles were there and ready to launch? And that politicians making these decisions might not make it a safer world.

ME: There were always concerns like that among some people. I didn't see that myself.

RH: You don't remember any special conversations or people being upset and annoyed at, I mean more upset and annoyed than we usually are at politicians during times when those talks were being publicized?

ME: No, I don't believe so. I did see in fact, some of these talks, well, like the Minuteman II system was shut down. That was a smart trade off on our side because we got rid of the oldest missile system that we had in operation, meaning the least accurate, and the least reliable of all the systems we had and probably the most expensive to maintain. I don't know if that necessarily made the world any safer or not. We got rid of some aging equipment, but on the other hand we still have quite a number of missiles. And, and I just…

RH: But it didn't seem to you that it affected the way you or people around you did your jobs?

ME: No, it didn't affect the way we did our jobs. Our intent was to keep the missiles as operational as humanly possible.

RH: I mean, some people might have felt betrayed in that situation. You were responsible for these missiles, you were doing your job, and now politicians are trading them away?

ME: No, I don't think that it was, that didn't bring up a feeling of betrayal as much as the targeting toward Shamu. When they targeted our missiles toward the oceans.

RH: Uh-hmm, uh-hmm.

ME: That was, was more of "Yes, we've got missiles, but they're all ready to go, but they're ready to go toward the ocean." And…

RH: There was an incident that you might or might not remember that happened in 1974, and it was near the end of the Nixon, President Nixon's time in the White House, before he resigned. When the Secretary of Defense issued a directive through all commanders, it went through the whole DoD system, which said that any orders coming directly from President Nixon, needed to be countersigned. That they should not accept an order from president, I mean maybe you didn't even hear about this?

ME: We didn't hear about that at my level, no.

RH: Okay. But I guess that raises the issue of, though, could you envision a time when you might not comply with an order?

ME: No. That it just didn't, never entered the mind that uh, the system was, was intended for only access by proper authority at the highest level. To send that command out, which would be sent through the Joint Chiefs of Staff it was incomprehensible that it would, that it would be invalid.

RH: Well, in this case, of course, Schlesinger was talking about what would have been a valid order but from an invalid person.

ME: No. We did not hear about that and there was no concern.

RH: I mean there wasn't ever any sense that if we ever got around to the point where someone said we should launch these missiles, there really wasn't any point in launching them anyway?

ME: No. I never heard that one. Being in maintenance, we did not specifically launch them anyway. That was done by the capsule crew. Maintenance's primary function was to make sure that missile was ready to go at all times. and that's where we focused. That someone else was turning the key and …

RH: You didn't ever feel that perhaps the people that were making the decisions might make decisions that maybe didn't make sense?

ME: No, …

RH: You're in the military…. I'm sure you felt that way sometimes in the military.

ME: We're not in the business of second guessing our leaders.

RH: But I meant at a higher level.

ME: Our system was designed with the politicians controlling military and those are the people that make the decisions of what we do.

RH: Now, the official Air Force line is that the lids were never blown of the silos except one time in one test? Does that seem right to you?

ME: Uh …

RH: Do you know of other cases where caps, where lids were blown off silos, that were not, are not officially reported?

ME: One time and one test? No, that is not what I know to be. We had two or three times during my career when they had several lids that were blown off. But it was a test and the missile had been physically isolated so it couldn't launch at the time, and it was just a test to make sure that all of the things function, including the mechanism that rolls this twenty ton blast door out of the way. And they put sand bags up to catch the door and they cranked it back on and this happened two or three times at this base.

RH: But it was always intentional?

ME: Yes. There was never any accidental door…

RH: It was always a test. What are your feelings about the ultimate decision to remove the four hundred fifty Minutemen at the end of the Cold War? Did you feel that that was the right thing to do? Do you feel good about that? Was it the right thing to do militarily? Do you wish those missiles were still there?

ME: I had, I had some regrets that they were gone at the time they were gone because it kept me from getting an assignment back here. But other than that, no. I they were, they were an older missile system and, as I mentioned earlier, the reliability was not as good as, as Minuteman IIIs and therefore, if you're going to trade something off, get rid of your junkers and …

RH: There isn't any sense that, that, kind of a sentimental attachment? That this is where you worked and that they're important and that they seemed important to you and …

ME: Well, there was a sentimental attachment, yes. I remember coming back from North Dakota and driving through the missile flight area and seeing these missile Launch Control Centers growing up in weeds and I'd spent twenty years of my life maintaining these things. But other than the run down of the system after they shut it down, no, I don't miss it. It was

necessary at the time and it's no longer a necessary item for the nation's defense.

RH: Did you know of any cases where individuals were killed in the line of duty while you were with the 44th?

ME: I don't have any personal connection with them, but yes, I knew of several SPs that died during the time that I was assigned there.

RH: Do you remember any of the circumstances?

ME: Most of them were helicopter crashes. We had two helicopter crashes and they lost four and three SPs and a pilot. And I think only one or two of those.

RH: In 1971 there were six people killed in a crash.

ME: And then we had one SP up in Juliet Flight that weapon a discharged and was killed.

RH: Would that have been a side arm?

ME: No. This was an M-16 and I believe, I don't have the details on it, but I believe it went off in the cab of the truck and he was in the back of the truck and it came through the truck and hit him and killed him.

RH: Um, do you … to me that raises the question was there ever any gunfire at the sites themselves?

ME: None that I'd ever heard about other than the accidental discharge, or there were a few other accidental discharges of weapons. They had a very extensive safety system for that, but every once in a while, somebody would slip up and say the chamber was empty when it wasn't, slide the bolt back in, and when they pulled the trigger to test it, it went off.

RH: Did you ever have any particularly threatening, frightening, harrowing moments of your own when you were working around the missile or in the bunker near the missile? Times when you were afraid you were locked in, or …

ME: Sure. I guess the most threatening experiences that I can recall with that respect were with weather. The blizzards out here were something else. And I'd, I've never been stranded on a missile site itself but …

[End side one, tape one]
[Beginning side two, tape one]

RH: Do you know of cases where people were injured in accidents or because of silly mistakes they made while they were working around the missile silos?

ME: There were quite of number of those, and I think, some of the sillier ones were a couple of guys were playing chicken with the door, as far as who's going to move their foot first before the door closed. And the guy that kept his foot there the longest lost his toes instead. That was really stupid, and they just were violating all the safety rule.

RH: Describe this door.

ME: Well, this particular door was a primary access hatch, which is a hydraulically operated concrete lined, steel door. And it's sort of like the top of a trap door spider entrance. It opens and closes clam-shell type thing. And beneath it is a ladder, I think it's a five section ladder, that goes on down into the launch equipment room. And as the door was closing, they were playing a game to see who's going to stay there the longest.

We also had a report of another base, it wasn't this one, another base where just below this entrance is a fifteen-ton steel vault door that raises and lowers on a screw jack. And it goes very slow, it takes it thirty minutes to open the thing. And some people were cutting corners and trying to squeeze in as soon as the door opened and then get their work done and get back out again. Well, one particular guy thought he could slip through as the door was closing. And he nearly got cut in half. He got stuck there and if a security policeman, top side, hadn't heard his screams and shut the switch off, the screw jack would have just kept going.

RH: Anybody ever fall around the missile silo?

ME: We did have a person at another base, again, it wasn't at this base, we had a person that had decided he was going to climb down a rope in the launch tube instead of taking an elevator work cage. And he climbed down and decided he didn't have the arm strength to get back up again, and the rope wasn't long enough to reach the bottom. And he ended up falling and breaking his back.

RH: How far did he fall?

ME: Approximately forty-five feet, I think it was.

RH: Where were you located? Where did you live while you were on your tour here?

ME: Initially, I lived on base in the dormitories. For awhile, I had an apartment in Black Hawk, and then I had gotten an apartment in town for awhile. And then when I got married got a home on the west side of town.

RH: Can you describe, just in your own words, describe the environment, the terrain, the land where you worked?

ME: Describe it? I guess beautiful would be about the most accurate term. But with that you have some pretty cruel weather that can be devastating at times. You have a nice white, blanket of white, but along with that blanket white you may have a forty or fifty mile an hour wind that could hide a semi.

RH: Were the winters the worst problem? Did that make your work harder than anything else? The wind?

ME: I believe it did, yes. We had, what they called traffic conditions that were reported from the base to us to tell us whether it was safe to travel on the roads. And TC Red was, "Don't go anywhere." The road conditions at times were bad in one part of the complex and in another part they'd be perfectly sunny and just as nice as can be. And I had been stuck on site for a number of hours on a missile site. We drove out in the middle of a blizzard when things were pretty rough and you could barely see the road. The winds were blowing and icy. And we got out to the site, we did our work, we were ready to come home. And the base says you can't come home because it's too icy here. And we knew that state they were in, we'd just driven through that same condition to get to the site. But now that it was at the base and they knew about it, it was too icy. We had reported that it was icy on the way out, and they thought nothing of it, when we told them on the radio. But once it got to them ….

RH: So what'd you do?

ME: We waited on site. We went to the, we went from the, the Launch Facility, over to the nearest Launch Control Center where they have facilities where you can sleep, spend the day, there's food and a cook assigned. And we spent a number of hours there before we were allowed to proceed back to the base.

RH: How often did that happen?

ME: It was quite frequent in the winter months. You never know. It just depends on the weather. You could have one year, where you'd get stuck out on site a half a dozen times and another year where it never happened.

RH: Did you ever have to stay over night?

ME: Yes. That's what they called RON. Remain Over Night. And we had some teams, like the periodic maintenance teams that were out there that would schedule that. And they would expect to be out there for two or three days at a time on a scheduled basis. There were a few teams that did not plan on it, but we were always told to have a change of clothes and toothbrush, along with our winter survival gear, which was insulated clothing.

RH: When that happened you stayed in rooms at the Launch Control Facility?

ME: Yeah, the Launch Control Facility normally had three extra rooms each with six or eight bunks in it.

RH: Were there ever times when you couldn't get from the site to the Launch Control Facility?

ME: There were occasions like that, when a person would be stranded on a Launch Facility. A missile site where there's nothing above ground except an antenna and a couple of light poles.

RH: What did they do then?

ME: They would usually go into the support equipment room, which is more of a bunker type, concrete building. And in this room there was a diesel generator and an air conditioning unit, which kept the missile complex cool, but not necessarily the support room. It exhausted the heat into that room. So you did have a source of heat there. And you could stay there, although you didn't have food, other than what was in your winter survival rations. There were some in more recent years, foil packs, but I think they were called in-flight rations earlier when I first started going to the field. There was enough food there to last you for three days.

RH: Was there cases of individuals being trapped that long? Stranded that long?

ME: No. There were never any cases of individuals being stranded that long. Each missile site, each Launch Control Center had a front end loader, a big bucket type piece of equipment that the facility manager operates, and we did have some facility managers that would be sent out to rescue. Clear the road out until you got to the Launch Facility and rescue the person, bring them back. That happened on a few occasions. I was a Facility Manager for four years and I didn't have any occasion to rescue anyone directly. And if this would have been a, probably a second

alternative, the first alternative for getting somebody out of there, if they couldn't drive out, would be to send a helicopter out there to rescue them.

RH: Was this ever life threatening?

ME: Yes, it was. The weather, you could, you could freeze to death a lot of times. In fact, the first year that I arrived at Ellsworth they'd lost someone in the on base, they had froze to death wandering on base in a blizzard. Couldn't find shelter, and froze to death on base. So you didn't have to be out in the middle of the prairie. It could happen anywhere. These blizzards are really something to be aware of.

RH: Did summer weather present its own special problems?

ME: Yes it did. In the summer time, you had to be careful about reaching in under things and places where you hadn't looked first. We had a few rattlesnakes on site that would hide under door, the launcher door. And we'd also have black widow spiders that were frequent at a number of sites and be all over the place.

RH: Did the heat in the summer present problems?

ME: Not a serious problem. It's a fairly mild area around here. And the site itself, is the launch equipment room is air conditioned because of the equipment down there to keep everything at a constant temperature. The cooling air going to the racks is fifty-five degrees. When it comes out, if it's seventy, you're lucky. So it wasn't uncomfortable at all down around the missile and the support building was usually not that bad.

RH: Maybe you were happy to get inside?

ME: Usually you were. The drive out was sometimes more challenging in non-air conditioned trucks.

RH: Were there ever water problems? High water tables or water opening in to things?

ME: Oh, we had a number of sites, because of the water table, just the location of the site, the natural drainage in some areas where they had to put in extra sump pumps. They were de-watering wells and sump pumps on probably two dozen sites all together. These sites, some of them the water would run up against the launch door and then it would run down into the missile and have to be pumped back out again. On other cases, where the water table was just coming up too high, the wells were located inside the fenced in area but not nearly as close to the missile itself, and they would just pump the water. They'd sink a well and just pump the

water out of that area to another place and constantly draw the water table down around the missile. And we did have one site that they told me was built over an underground stream. And they'd come out and done extensive work on it a couple times, and it shifted, twisted the launch tube.

RH: What happened to that site? Was it eliminated?

ME: No. It had not been eliminated until they closed down the system, but it was, it had been worked on quite extensively. They pumped a lot of concrete down around the bottom of it to try to stabilize it. And they were concerned about if it shifted too much, it would effect the targeting of the missile.

RH: That's what I was thinking, that …

ME: Yeah.

RH: But I guess they thought they could accommodate that.

ME: Well …

RH: They could change the targeting so that it would be all right?

ME: They had compensated with the suspension and the targeting was taken care of. And it was more, the shifting was getting so bad to where they weren't sure if it was going to come out of the launch tube straight. And that's when they had people come in and work on it.

RH: Did you say the water had leaked in through some of those heavy launch doors? The reinforced concrete doors.

ME: Underneath them, there's a rubber seal where it slides off a gasket between the concrete door and the rails and another slide's down at the bottom. And that, that seal, after twenty plus years, the sites, a lot of them, were built around '65 I believe, and so they, they'd had quite a few years of sitting out in the weather.

RH: Does that in any way affect your confidence in their being protected against nuclear strikes? I mean, if water can get into them? I mean, we've got all this concrete …

ME: No.

RH: … but what use is it if there are gaps?

ME: Well, the gap was not that much of a gap and it was offset. Where you have a blast would come directly at something, this is more like a baffle effect that would keep you from getting a direct.

RH: And I guess water goes where it wants to go?

ME: It's going to go, yeah, through any little crack.

RH: Did you yourself, have any interesting encounters with animals?

ME: Um, mainly …

RH: Did you get up close and personal with a rattlesnake?

ME: No. Not, not while I was working at the missile sites. I did have a lot of black widows that I smashed. Didn't get bit by any, but smashed quite a few of them.

RH: Did animals ever get into that perimeter fence?

ME: Oh yeah. The main culprit, I guess you'd say, would be birds, followed by rabbits. The birds you couldn't do anything about. And occasionally you'd get a prankster that wanted to cause the cops some grief. Set off the security alarms by throwing a handful of birdseed on top of the launcher enclosure. And the birds would come in there and set the alarms off, the cops would come out and nothing there.

RH: Now you say a prankster. Would that, that have to have been someone who had access to the …

ME: It might have been one of the crews that was out doing maintenance or it could be somebody from off-site that just took a baggie full of bird seed, pitched it across.

RH: It would be, that would take a pretty good shot!

ME: Um, not necessarily. It, it's …

RH: What do you think, though? Wouldn't you think that there were maintenance personnel or others …

ME: I would think it's normally other cops that were …

RH: Other cops.

ME: trying to get back at some of the cops that were out there on that site and …

RH: Never a maintenance person?

ME: Oh, that happens too! [laughter]

RH: What about, what about bigger animals? Deer or cattle? Did any of them ever bash into the fence? Or a deer leap over the fence?

ME: Um, no, the deer, never had any deer leap over the fence. I think there might have been one occasion, in all of the years I can think of right now, when they had some cattle that got on site once. Somebody …

RH: Did they go in shooting?

ME: No. [Laughter] No, they took them captive. [laughs]

RH: Were there ever cattle, that were so many of them around some of these, it was hard for you to get in? They'd block the road or block the gate?

ME: Well, if you drive the country roads in South Dakota your going to see the people moving cattle along the road anyway.

RH: That's why I asked the question.

ME: Well it's the same concept when you had to get to the site. Occasionally, you'd have to drive through a herd a cattle because the access road from the main road to the site would have cattle on it. And they'd move out of the way if you'd just take it slow. And don't try to use the bumper of the truck as a prod.

RH: That makes me think about your relations with the people who lived around and ranched around the missile silos. Any problems there?

ME: For the most part, the land owner relations were excellent. Everyone out there knew that we had a job and knew what it was and that we were out there defending the country in the way that was necessary.

RH: There weren't any incidents where cattle were, cattle might have been killed and they blamed you?

ME: Not on the missile site itself. Occasionally we would have a truck that would hit a cow. A black cow on a black top road or whatever, and you couldn't see it at night. In those cases I believe that the government made amends to the…

RH: Generous restitution?

ME: I suspect it was.

RH: So you didn't sense particular tension with the land owners around the sites?

ME: No.

RH: In town was there any particular tension?

ME: Not while I was here.

RH: Were there ever demonstrations? People who came around to a site to protest the fact that it was there or the significance of it? Or the possibility of its use?

ME: I had not personally seen them, but I had heard that there were about six demonstrators that came out every Easter and they would do their thing for a day. And occasionally they'd put lilies at the gate or they'd go out to the flight line of the base and stand on the north end of the flight line or right at the edge of the base.

RH: But you never saw these people?

ME: I had no dealings with them at all.

RH: And they wouldn't have been a maintenance problem, they'd have been an SP problem?

ME: That's correct. Maintenance would call it in and report it and that's as far as we would deal with it.

RH: Was your attitude toward them, and your co-workers attitude toward them, that they were just misguided?

ME: I don't know.

RH: If you heard about people doing that, did it affect you in any way?

ME: It did not affect me in any way. I knew that they had their beliefs and I knew that I had a job to do and …

RH: How were race relations in your unit?

ME: I don't think we had any problems. Well, about '70 or so, I think they did have an incident. I don't recall any specifics of it other than there were some problems in the dining hall with some blacks and that they weren't being, they didn't feel they were being treated properly. But they started some training, race relations training shortly after that, and things got better.

RH: Would you think that the special conditions of the missile mission, missile units would have made race relations better or worse than in the rest of the Air Force or the Armed Services in general?

ME: I think they might have been a little bit worse in that many of the blacks that I knew didn't like the cold in the north and most of the missile bases are in the north and when you come to one of those, if you're assigned to a missile career field, you're there for your career, pretty much.

RH: Uh-hmm.

ME: And they, most of them wanted to get a warm weather assignment and I couldn't fault anybody for that. But it seemed that a lot of the blacks I knew were from southern states and they didn't handle the cold well and didn't really want to be here.

RH: Was one result of that, that there was maybe a different racial mix among missile units than other units? Did you have smaller percentage of black personnel?

ME: I really don't know. I was … my entire career was pretty much spent in missiles, so I couldn't tell you what other units have.

RH: What about off base? Did you have any sense that, or did the African Americans ever complain that they were treated, mistreated when they were off base?

ME: No. No more than young white Airmen that felt they wanted to be near a big city or, or have this type of entertainment or that type entertainment. And this is pretty much a near rural atmosphere and country music, when I first got here, was about the only music you'd hear on the radio.

RH: So, was there, did you all sort of feel that way? Most of you? Blacks and whites, that this was a hardship kind of tour?

ME: Initially, yes. When I first got here I said "Where in the world is Ellsworth Air Force Base South Dakota?" And, uh …

RH: What changed that for you?

ME: I guess, time. Being here after three or four years. It got to be comfortable and home.

RH: But you stayed here.

ME: Yes I did?

RH: Where are you from?

ME: Des Moines.

RH: Oh. I guess what I'm getting at is it must have been something positive about it. I mean, is it the beauty of the countryside?

ME: I, yes, it's very much the beauty of the countryside. The openness of the people in this region to sit down and talk to you and say, "Hi!" Another factor would be my wife grew up here and her family is here.

RH: What about relations with Native Americans?

ME: Well, had a few in missiles, but very few.

RH: Well, I guess I mean those who were not in the missiles. Those who were around, living around the sites.

ME: No different than any other ….

RH: Didn't have any particular … none of them complained in any special way? Or …

ME: No. Not that I'd ever heard of.

RH: I mean there wasn't any sense, you sometimes hear the complaint that "Well, as usual, they don't think where we live is very valuable or important and it's only good enough to have missiles put on it."

ME: Most of the missiles are not near the Indian reservation that I am aware of. They're out in agricultural areas.

RH: Were you here during the flood? 1972?

ME: Yes I was.

RH: And did you take part in that? Did you have any experience in that?

ME: Very much.

RH: Tell me something about it.

ME: Okay. June ninth of 1972. It was exactly one week after Julie and I had gotten married. We were in our home on Sunset Drive. It's a rental. And we'd heard some reports on the radio, a lot of rain was coming down, we heard reports on the radio saying "If you have power boats, bring 'em to Canyon Lake so we can drive, so we can go up Rapid Creek." And I knew what Rapid creek was. It's knee deep at most! And I couldn't imagine anybody taking a power boat up Rapid Creek, so I thought it must be some kind of joke. And we did have the house that we were in had a basement and it had window wells. A window well had filled up with water. It was probably two inches from the top of the window or three, whatever the ground level was where it ran off the other way. And we were getting a little water through the, around the seal on that thing and I mopped that up. Otherwise, we didn't know that night that there was really a flood till the next morning. We got out and started to see wreckage. And Sunset Drive is about two blocks from Canyon Lake where the park, where the dam broke. And I walked up to Canyon Lake with my wife and we saw the pieces of houses throughout the empty lake bed. There was a big propane tank that must have been fifty, fifty five hundred gallons or whatever, propane that was just hissing away. And I went to a nearby house and asked them if I could borrow a pair of pliers and I shut the valve off on that thing. We walked on up to the basin of where Canyon Lake was, there was a Nimrod camper. One of these fold-out campers with a tent, canvas top on it. It had floated down and the canvas top and everything was intact. Later on I was to find out that sixty foot trailers had gone end-over-end down the canyon as they, as the flood came through there. Julie's wife at the, or Julie's husband [laughs] Julie's boss at the time was a doctor who lived just up the canyon a little ways from Canyon Lake. And we walked up to where we could see where his house was. They were condominiums and there must have been nine of sixteen that were gone. His was still there, but on the ground floor it was more than three foot of mud in some places where the floor had collapsed and it settled. And we helped him salvage what we could out of that area.

RH: What, did, were you involved in any activities as a part of your unit? Cleaning it up or saving anything?

ME: Well, it was, the city was pretty much cut off. All the bridges, all the bridges were told to be impassable. We didn't have, let's see, didn't have electricity and gas. We had gas for a while, I think, because in the area that I was, that we were living in, a lot of the lines had been ruptured and they had isolated it to where we still had some gas. That's how I got a bath or two, was Julie's folks had a home two houses away from where

we were living and they had an irrigation ditch that ran through there that was still running with spring water in it, so it was clear water that was fresh. And she was able to dip out water and heat up water for a bath for me. That was the only way that we could get clean in that particular. The roads were all blocked. The base had gotten through before the phone lines went out and said "If you're alive, stay put. Don't try to come to the base. You can't here. And we'll call you when it's time to come in." So I spent the next week helping out. Trying to, looking for bodies for a while. There were a couple false alarms because after that Canyon Lake Dam had burst, Pactola was expected or Deerfield, one of those two, was, they thought that was near breaking, too. And there were some false alarms telling us to head for high ground. That there water coming down the canyon and you took it seriously after that first one!

RH: What about relations between men and the first of the female Minutemen crew members? Do you remember those days when the first women were coming in and what that was like?

ME: I was in maintenance and you're talking crew members or?

RH: Okay, so …

ME: There were two different times when they came in.

RH: Okay.

ME: We had women come into the maintenance force a number of years before they were on the crew force.

RH: Okay. When was that?

ME: It was just about '76 I think or '75 when women started coming in.

RH: Did that present any special problems? For you with, first in the maintenance?

ME: Well, it did present a few problems because some of the guys thought that the women should have to prove themselves that they could be as good as the guys. And this, you had to control the situation. Make sure that they understood that they were there to do the same job that we were there to do. And …

RH: Were they as good?

ME: In a lot of areas, yes. In a few, depends on their physical structure. I, there were some that just weren't as, as strong and muscular and weren't able to lift fifty-five pound tool box up over their head and …

RH: What about when the first crew members came in? Were you aware of that?

ME: Oh yes! We were aware of it because the capsule itself is a confined area and some modifications to the facilities down there had to made to where the commode and things were a little more privatized. And, uh …

RH: Did you have, did you work on that?

ME: We worked on making sure that the, that the curtains and enclosures were all in place and that they had, that they functioned properly and …

RH: So you did occasionally do some maintenance work on the, the command, the control centers themselves?

ME: Oh yes. Maintenance was responsible from one end to the other of the missile system. Sometimes it was Civil Engineering, but most times it was the missile maintenance crews themselves that …

RH: What about the attitude toward women coming in as crew members? Was there a sense that this degraded the system?

ME: All I can give you is second-hand information that I got from talking with crew members. And some thought there might be a degrading the system in that the crew members may not be focused on their job. That they're thinking about that young lady across from them or whatever and distracted in some way.

RH: Did you ever hear the argument that women weren't tough enough? That they might not do what was required of them?

ME: Probably that was among the list of things that they'd run down a list saying this or that or they're not suited. That can't be out there because this guy's married and, but they're not going to do anything out there that they wouldn't do somewhere else.

RH: So, do you have any opinions of your own about all of that? About whether there's a difference between men and women in the military service? Whether, what roles women out to be able to play?

ME: I really don't have any any specific limitations on women as a group. Individuals, possibly. And that would apply not necessarily to a woman so

much as a man, too. If they can't do the job, then yes, I don't want them in the position. But if they can do the job, let them do it!

RH: When, did you always have the right equipment to do your job?

ME: No. Not always. And sometimes you'd need to fix something and you'd need to get it fixed as quickly as possible. And well, one incident I can recall, I was out on an inspection trip as Quality Control. And I was examining a site for hardware and we found that the air control system, which operates all the air conditioning, had, the line had ruptured. The copper tubing had come out of a fitting and was leaking. We didn't have the proper gaskets to fix it right at the time. In order to get the system back on-line and keep the system operating, I scrounged around where I found a piece of string that we'd used for tags to tie on to a piece of equipment. Took the string off of it and used that has packing, put the nut back together and got the site back on alert, and wrote it up and told them to put the proper gasket in there on the next trip out for maintenance. Things like that happen all the time.

RH: Were there particular items, things that you might have needed, that there were perpetual shortages of? Periodic shortages of?

ME: Not really. Most everything was abundantly supplied at the base, but not necessarily available at the missile site at the time you needed it. You'd have to have it hauled out by a special truck which would take another two hours or tree hours. Or flown out by helicopter, which would take you nearly an hour.

RH: But there wasn't ever the sense that the system could be not at a high enough state of readiness because there were small spare parts that weren't available.

ME: We didn't experience that with small parts. With some major parts, we were beginning to when they finally shut the system down.

RH: Was there any particular part that was true for?

ME: The guidance system for the missile itself, I think was one that they were really having to watch closely at the final stages to get repaired units back and have enough on hand.

RH: Did you always have sufficient staff? Did you have personnel shortages?

ME: Occasionally we had shortages of personnel in a variety of areas. SPs was one that I remember specifically where they had some serious shortages and they had to modify their shifts. Instead of working a three

day shift, they put them on four day shifts for a while when they were short of people.

RH: That never happened in maintenance?

ME: Not exactly. What would happen in maintenance instead was that the list of things that needed to repaired would just keep getting longer and longer. And unless the priority was high enough on it, it would never get fixed because, you might have a thousand page list of little hardware discrepancies that would include a missing washer or a bolt or a nut here or there.

RH: So was the problem of personnel shortage a chronic one? I mean, there was, you were just, never had, there were not enough people doing your job?

ME: From the technician's point of view, yes, that was the problem. Manpower specialist would come in and evaluate the system and they would tell us that we didn't need as many people as we had no matter how many you had, but …

RH: Did that ever result in changes in your personnel level? Did you have, would you have, did you lose staff because of manpower evaluators?

ME: Yes, we did and, in fact, usually you hated to see them show up because they were always going to help you to lose a few more people.

RH: So when that was happening, that couldn't have been a time of very high morale?

ME: For the managers, no. The other people didn't, normally weren't aware of what was going on and didn't realize that it would make them work harder in the …

RH: But it did eventually filter down to you and that must have had some affect on how you felt about your job.

ME: By the time that I was aware of manpower studies I was a manager to the point where I was dreading to see those guys show up anyway!

RH: But even if you didn't know about the manpower studies, you would have felt it in your, the amount of work you had to do if your unit lost personnel.

ME: Well, um, no. As a maintenance person, you didn't feel it in the amount of work you had to do because that list, like I said, would just keep getting longer and longer and you'd be working the priority items. The items that

were priority three, four, and five. And the six through nines would just sort of sit there forever.

RH: And that didn't bother you?

ME: It did as far as taking the pride in saying "Yes, we've got the list as small as it could be," but they weren't things that would impair a launch or degrade the system in any way. They were more hardware things that well, some of the, some of the higher of those low priority things might not survive a blast if we had a nuclear blast on it. That'd be the only way. If we launched before a blast hit.

RH: You still felt confident about the reliability of the missile even though those low priority …

ME: Oh, the system was going to work.

RH: That's why they were low priority things?

ME: That's right.

RH: Were there, did you ever question that list? That perhaps there were things that you thought were more important than whoever was responsible for assigning?

ME: On a regular basis. It was what they call a recon. That they would go through the list and they would determine whether or not the proper parts had been ordered for each of the discrepancies on the list. And then they'd make sure that the part was the right one. They'd go verify it physically. Say, "Yes. This is what it says and this is what we have. And we're going to put it on." And at each site had a box, a bin where they'd put the parts and what job they were listed against.

RH: Were there ever jobs that you thought needed to be done at a higher priority than the protocol called for?

ME: Work center supervisors would review that list and if it looked like it was something that needed to be done there, they would raise the priority on it.

RH: That was never a big problem?

ME: No.

RH: Um, what about your uniform clothing? Were they, did you have the right things? Was it appropriate for the weather?

ME: Yes. I can't recall anytime when we didn't have the right equipment. For this area, you need winter survival gear for the wintertime. And other than a few minor items, safety tote shoes, which were issued individually, a lot of the other items, gloves, goggles, were part of a kit that would be issued for the job if you need those safety items. Hard hat was an individual issue item.

RH: Was there a change over time in what safety items were required for you to use?

ME: Yes. There were a couple times when things changed. Soldering with a pencil and working on a circuit card when I first came into the Air Force did not require goggles. And towards the end of my time in the Air Force it seemed like you needed goggles and a respirator and …

RH: Well, what I hear in your tone, I hear you saying that maybe you thought that safety concerns went a little overboard eventually?

ME: I believe in some cases they did go a little beyond what was prudent.

RH: Did that cause some individuals not to comply? Leave those goggles off some times if, because you didn't think they were necessary?

ME: Well, I don't know if that caused the noncompliance as much as just sometimes people would forget. They'd get busy doing something and pull the goggles off for a second and then they'd go back to it and forget that they had taken them off.

RH: Was that another area where you were supposed to watch one another?

ME: It was, yes, it was an area that you're supposed to watch one another. This one is called "buddy care."

RH: "Buddy care!" I like that! [laughter] Did that ever lead to someone turning in someone else?

ME: No. This was not a turn-in type of thing.

RH: Yeah. I see.

ME: This was more just a reminder that "Hey, you forgot your goggles" Or "Make sure you hook up your safety lanyard before you get close to that hole so you don't fall down."

RH: What about food? How was it?

ME: [laughs] Well, I would imagine that you could you could run the gauntlet from one end to the other with that. When I first came in to the Air Force, I didn't think that it was all that good. I got some additional training in New Jersey with the Army and I found out how good the Air Force food really was! [laughter]

RH: Was there a lot of complaining about the food?

ME: Oh there was. I don't think it was an awful lot. It's gone completely now. It's more of a cafeteria style serving. And instead of having GIs behind the counter, they have civilians or contract civilians that prepare the food. And, uh …

RH: What about the food at the Launch Control Facilities?

ME: That food is prepared by a GI. Air Force Cook. And that's a special career field. The food that is provided them is, it's like a military TV dinner, I guess you'd say. They're called foil packs and each individual item is in a separate foil pack so you can order a roast chicken in one and mashed potatoes in another foil pack and get your corn in a third one. And these are all assembled at one common location. Warren Air Force Base in Cheyenne, where they, for the missile sites, where they prepare these Air Force TV dinners.

RH: Was there a lot of complaining about that food?

ME: Not really. It gave quite a bit more variety than what they had had in the past. And the quality's fairly consistent. Not the highest, but it's far from the lowest.

RH: It wasn't a particular issue among the people who had to spend a lot of time there? Or if you were forced by the weather to spend an overnight there, is that something you might complain about? "Oh, I'm going to have to eat here?"

ME: Not really. There was enough variety where you could usually get whatever you wanted. They even had frozen pizzas out there. And they try to make it special for them on Thanksgiving and have a turkey out there and some of the stuff. I mean your, usually the Facility manager was helping the cook set things up for that because the cooks, you're talking about a seventeen to nineteen year old usually that does not, has never cooked a turkey in his life or her life. And out there trying to fix one in a convection oven, and …

RH: Was boredom a problem?

ME: Possibly for some people in certain areas. Like the Security Police when they're just waiting for an alarm to go off. At the Launch Control Center they have two Security Police that run the day shift and two on the night shift that go out and check the sites where they have alarms. And when they're not checking alarms, they're usually studying or sitting around watching television.

RH: Did special games or anything develop as a way of coping with the boredom?

ME: They had, some sites had video games. There was a large library collection of paperbacks and so forth because the library, base library, would send out a box of paperback books about every other week, or every other month to us. And …

RH: I guess I meant sort of individual games that the personnel might have made up themselves. Um …

ME: Not that I ever noticed. No.

RH: Were there any humorous experiences that come to mind? Anything that, I mean, that you recall that makes you smile?

ME: Hmmm. Related to missiles? Yeah, there is. As a Facility Manager, and that was the person that managed the Launch Control Center and the people on it, we had one Facility Manager who seemed like he had a cloud over his head all the time. Joe was his name. I can't think of the last name right now. In the summer time it was hot enough to where they keep the, the front door of the Launch Control Center ….

[End side two, tape one]
[Beginning side one, tape two]

ME: Okay, the front door of the launch control center had been propped open and the cops had gone to sleep on the couch watching television, at night. Next thing you know, they're screaming "There's a skunk in here." Well the facility manager got up, it was his job to handle it. [laughter] Well he didn't see any way, they weren't going to shoot it in the building, so there was no way for him to do anything except take a broom and push him out the door. So he took one of the straw brooms and pushed him out the door. Unfortunately the skunk didn't like being pushed out the door, and he deposited on Joe and the building a few times. So the stench of skunk was throughout that Launch Control Center for awhile. Now, the reason I'm saying Joe had a cloud over his head because another incident with Joe was we had just off the Launch Control Center there was a big concrete pad, called the "helipad" where the helicopters would land. And

part of the facility managers job, the FM job, was to go out there and make sure that when the helicopter landed that we didn't have any fires and that everything was flight worthy when it came down, and that it got back up the same way. Well, Joe was out there with his ear muffs and his goggles on, sound and eye protection, waiting for a helicopter to land. And this concrete pad, where the helicopter lands, is a place that the local cattle like to frequent because of the warmth of the concrete. They like to come walk around that concrete pad. And they usually do their business while they're out there, and there were cow pies around. Well Joe hadn't gotten out there to clear them off, or didn't notice them and one of these cow pies was right between him and the helicopter. When the helicopter down draft came down the cow pie came up and Joe caught it in the face.

RH: Wasn't there a fence around that facility?

ME: No. The helipad is out in a clear area where you don't have any obstructions for the helicopter when he comes in for a landing. And it was part of, just off the access road as you approach the site.

RH: But there is a fence around the site, it just doesn't encompass…

ME: Not encompassing the helipad.

RH: I see. Can you, would you think that there are lessons, positive ones or negative ones that you would draw from your experience in missile maintenance?

ME: Well, I guess that you can do just about anything that you set your mind to if you want to do it. Just take a little patience, common sense and time.

RH: Did you see tasks that you needed to do sometimes that your first thought was "Well, we're never going to get this" and then patience and sense and taking time made it work? That ever happen?

ME: Yes, a lot of times. We were stranded at an LF one time during a blizzard and we weren't supposed to be on the LF yet, we were sitting at the gate, because there'd been a security alarm. The cops were on their way there in a four-wheel drive vehicle, which we did not have one. But they didn't make it. They drove off the road, and they were stuck. So we in our two-wheel drive vehicle were asked to go rescue them. [laughter] In order to get there, we had to take our time and use a little common sense. We had to put chains on the truck that we hadn't gotten to yet because we didn't feel the conditions warranted it. But we put chains on the truck and we had what they call a white-out. You couldn't see the road and tell where it was at because everything was white. We had enough people in the truck to where we had two walk in front of the truck in order to tell where the

road was. When one disappeared you don't drive that direction, you drive on the other side. And we finally got to the four-wheel drive vehicle and rescued the cops, brought them to the site where they were able to, to secure the site so we could enter. And make sure that things were repaired.

RH: I'm sure they were very grateful.

ME: They were. Because they were stuck in the middle of no where and not going anywhere.

RH: And maybe a little embarrassed?

ME: Possibly.

RH: You had to rescue them so they could secure the site for you.

ME: Just taking a little time and common sense making sure you've got some people out there to know where the road is and putting some chains on.

RH: What would you say was your greatest challenge?

ME: Greatest challenge? As I look back on it, I guess my greatest challenge was getting promoted. Most people, in order to make Chief Master Sergeant, which is the highest enlisted grade, have to get headquarters assignments and have to get moved here and there and do a number of things in order to get the right endorsements to get promoted. I was fortunate in coming to Ellsworth as a two-striper and leaving just two weeks before I pinned on the highest enlisted grade, Chief Master Sergeant. And the only assignment that I had during that time period was a year in Korea.

RH: When you left Ellsworth, you didn't retire then?

ME: No, I didn't.

RH: Where did you go from there?

ME: I went to Grand Forks, North Dakota. Another missile base. Because, the number of chiefs, I got promoted out of the job here. I'd been here longer than all the of the other Chiefs that were at this base and in the career field.

RH: Where there any unsolved problems that you left behind, that worried you? When you left, did you think "Well, everything is in good shape

there?" Or were there things that you thought about that you were concerned?

ME: No, you're, you're always taught to have somebody behind you that's going to be able to fill in so that you're never missed. And that's always part of the job, is to know that the next guy behind you is going to be doing the same job. And that there's a continuity book or some instructions telling you how to do the job in case that's forgotten or whatever.

RH: Were there any particularly interesting personalities that you want to talk about? People you came into contact with, got to know, had to deal with, somebody who was especially difficult or fun?

ME: Uh, there's hundreds of personalities. I don't know that any specific one comes to mind off hand that ...

RH: Did you ever hear of any legends, or interesting stories, that you thought might not have been true about things that were supposed to have happened at any of the facilities? Things like ghost stories? Or, you know, peculiar events occurring?

ME: There were some ghost stories, and that was, one of them had to do with the site where the young man had been shot up in Juliet Flight. And that was supposedly a haunted site. But I had never…

RH: What would haunted mean?

ME: Haunted …

RH: Who was supposed to be haunting it?

ME: Supposedly the ghost of the kid who was shot up there.

RH: Oh, I see.

ME: I had no experiences to confirm or deny any of those.

RH: Were there any other stories like that?

ME: Uh…

RH: About places that were deemed special? Or nothing ever went right? Or odd occurrences happened?

ME: There was supposedly a site where UFOs had landed, they said. [Laughter.] Strange flashing lights on site. Again, it was just another one of those stories.

RH: Had the cops been called out for that?

ME: They said they had been called out, but I don't know whether they had or not.

RH: Do you have any best memory about your experience in the missile field?

ME: Best memory? Um …

RH: Do you have any worst memory? I mean …

ME: Well, it guess it's another one of those blizzard stories.

RH: Yeah?

ME: They had closed the roads for the military vehicles, Interstate 90. And we were, three of us in a truck and we had just passed the last chance to get off to go to a Launch Control Facility and remain over night. And the roads were glare ice, and we called on, called in on the radio to check-in and they said "You need to back." We said "We just missed that exit, it's too icy, we can't go back on the interstate because there's no cross over or anything here." Well, they said "Well, come on in, but make sure the guy who has the most rank is driving because he's got the most to lose." [Laughter.] Well, that happened to be me. The road conditions were so bad that both of us, as we got out of the truck, the passenger side and the driver's side, almost fell down. In fact I think the passenger did, or the driver did fall down as he was going around because it was just glare ice all over the place. We got switched around and proceeded on at a snail's pace. When we got back to base, the Wing Commander was waiting at the door for us to get back, cause I guess we were the last trip to be secured, to make sure that everybody go safely home. Or got back to safety anyway. And glad to see us.

RH: What do you see as the, the future for the missile business?

ME: Unfortunately for missiles, I think they've, their purpose in the world, is just, for intercontinental ballistic missiles, their purpose is pretty much gone. I fear the threat anymore of a terrorist bringing a nuclear bomb under their coat more than having a missile come.

RH: Apart from the end, the deactivation of the Minuteman II, what were the most dramatic changes that you saw over the years? The things that really changed?

ME: Things that really changed? Well, the dining facilities really changed in that they're more of cafeteria-style versus when I first came in, it was "Take your plate and we'll throw some of this and that." And now the servings are all individually prepared or set where you just take a bowl of whatever you want, or a plate.

RH: Does that reflect a larger change about the status of being in the service?

ME: Well, I think it, the level of sophistication, if you want to call it that, has really been brought up. In the past it was more of a survival, "This is what you need to survive," and now it's "This is how you'd like to be served."

RH: Is there a sense that you're, you're more respected? That your work is taken more seriously? More like professionals?

ME: I believe that's part of the goal in doing that, was that to present a professional atmosphere for the people to where they take more pride in their work.

RH: That's all of my questions. [laughter] This is your chance! Do you have any other comments you'd like to make?

ME: Oh.

RH: Anyone you especially want to "get" here on tape?

ME: Well, the site that's been selected for the museum out there, is one that I worked as a Facility Manager for a number of years.

RH: Is that right?

ME: It's got a unique water system on it that had a lot more processes required in order to treat the water because it was such a deep well and it was alkaline in that particular area. They had an extra carbon filter, and they had some extra flushing and filtering, and they even had an electrostatic filter to take out the minerals and things out of the water. The snow removal system on that site was unique too, in that instead of having a bucket-operated front end loader, for awhile they had a snow blower. And this wasn't just your driveway version, this was a five-hundred ton per hour snow blower, which you had to be qualified on. It was a track-operated thing. You had to keep the RPMs of the engine up to be able to throw the

snow, and at the same time just edge it into the snow where it would take enough without bogging down.

RH: Uh-hmm.

ME: And that was a little bit unique in some of the things at that site.

RH: Did any particularly interesting thing happen, things happen, on that, at that, at that LF, that come to mind? Since that is the one that's going to be the site, this would be of particular interest.

ME: At that LF? Other than the special care with the water, I think, if you, for the water, if you showed a bottle of water before treatment and after treatment, you're going to be able to see what the pioneers had to put up with out there.

RH: I've been there, and I've seen that water facility.

ME: That brownish red water that's got some ferrous oxide in it. Let's see, everything else out there was pretty much that same as what it was at all the other launch control facilities. Sewage lagoon was about the same. That was, that flight, Delta Flight, was one that had one of the LFs that had been, somebody had broken into the support building. And I don't know if it had been alarmed on or not, but I know that someone had crawled into an air duct and they'd cut a big hole in the side of an air duct to get into the support building. Now this had nothing to do with the launch, so there really wasn't a lot of excitement other than somebody got into a site, into part of a site.

RH: And there wasn't a feeling that they had done this as, to try to gain access to the more critical facilities?

ME: They couldn't gain access from there to the critical facilities. And if they'd gone over to gain access, they would have set off a half dozen alarms before they got to them.

RH: Okay, well thank you very much Chief Master Sergeant Ewart. This concludes our interview.

ME: You're welcome.